Evidence-Based Practice for Justice Involved Individuals

Expert Panel Meeting

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Illness Management and Recovery for People in Contact with the Criminal Justice System

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Illness self-management, also referred to as *wellness self-management*, is an important goal of psychiatric rehabilitation. The focus of illness self-management is on

helping consumers acquire the necessary knowledge and skills for minimizing the impact of their mental illness on their lives and achieving a sense of personal wellness and control over their destiny (Mueser et al., 2002). Self-management of one's psychiatric disability can be narrowly defined as including the ability to make informed treatment decisions, reducing the impact of distressing or otherwise problematic symptoms, and reducing the likelihood or severity of relapses and rehospitalizations. More broadly, illness self-management approaches also help people identify and pursue personal goals, and develop a physically and psychologically healthy lifestyle that is imbued with hope, optimism, and a sense of purpose (or "recovery") (Copeland, 1997; Gingerich & Mueser, 2005).

Evolution of Illness Self-Management

Efforts to foster the self-management of psychiatric illnesses in persons with psychiatric disabilities have their historical roots in similar efforts to help people manage chronic medical diseases, the movement in medicine toward shared decision-making between treatment providers and patients/consumers, and the rise of the mental health recovery movement in rebellion against traditional hierarchical (and coercive) psychiatric treatment.

Disease Self-management

Lifelong, chronic diseases such as diabetes, heart disease, and asthma by their very nature require ongoing care and management to minimize the disruptive effects on daily living and mortality. As modern medicine has learned more about factors which influence these diseases, the ability to manage them effectively has substantially improved. For example, understanding which foods can dramatically increase blood sugar levels can enable people with diabetes to maintain a steady glucose blood level through dietary monitoring. In addition, advances in medical treatment and management technology have also improved the outcomes of chronic diseases. For example, through regular monitoring of blood glucose levels, and daily administration of insulin, individuals with Type 1 diabetes can enjoy a normal and long life.

While advances in understanding the causes and determinants of disease outcomes have improved long-term prognosis, the gains from such information and technological advances can be realized only through teaching patients the principles of managing their illness, and helping them incorporate critical changes into their lifestyle. Thus, in routine medical practice, part of treating individuals with chronic diseases involves teaching them about the nature of those diseases, informing them about lifestyle changes that may promote better disease management, teaching them how to monitor their illness and when possible self-administer treatments, and knowing when they need to contact treatment providers in order to address emergent concerns before they more seriously compromise health and result in medical emergencies (Hanson, 1986; Masur, 1981; Swezey & Swezey, 1976).

Just as the treatment of chronic diseases has evolved to incorporate teaching self-management as a core part of treatment, so has the management of mental illnesses,

which are also chronic for many individuals. Most, if not all mental health professionals strive to help persons with a psychiatric disability learn about their mental illness and how to deal with it more effectively. Thus, promoting illness self-management is a natural part of any helping profession that endeavors to minimize the impact of a chronic disease on functioning and quality of life.

Shared Decision-making

Shared decision-making is the process by which important medical decisions are made in active collaboration with the patient/consumer, the treatment provider, and any other individuals who are closely involved with the person, such as family members. Shared decision-making is a movement that began in modern medicine (Campbell, Donaldson, Roberts, & Smith, 1996; Wennberg, 1991), and has been rapidly endorsed in psychiatry as well (Fenton, 2003; Hamann, Leucht, & Kissling, 2003). The rationale for shared decision-making is two-fold.

First, as the medical technology for treating different diseases has grown, so too has the awareness that the decision as to which interventions are best for a particular disease is not always an easy and objective one, but rather often depends on the personal values and preferences of the individual with the disease. For example, surgery for prostrate cancer may prolong life, but at the cost of compromised sexual function. In such cases, the decision to have surgery or not is better understood as a personal one that depends upon what is important to the individual, and is not simply an objective decision that can be made by the treatment provider. All treatments (as well as the decision not to obtain treatment) have their advantages and disadvantages, and therefore, in order to make informed decisions based on personal preferences, an individual needs basic information about the nature of the disorder, the treatment options, and the likely effects (both positive and negative) of those treatment options.

Second, adherence to recommended treatments is a problem throughout all of modern medicine (Blackwell, 1973), and in this regard psychiatry is no exception (Coldham, Addington, & Addington, 2002). *Psychological reactance* is a concept that refers to an individual's sensitivity to efforts by others to control his or her behavior (Brehm, 1966). Authoritarian-based, treatment recommendations may precipitate non-adherence in persons who are high on psychological reactance (Fogarty, 1997; Moore, Sellwood, & Stirling, 2000). On the other hand, people may be more likely to adhere to treatment recommendations if they are developed in collaborative spirit in which the individual's choice regarding the treatment decision is respected. Shared decision-making involves providing people with the information they need in order to make informed decisions about treatment, which may ultimately improve adherence to recommended and effective treatments.

The Consumer Movement

According to Frese and Davis (1997), the historical roots of the consumer movement for persons with SMI can be traced as far back as the establishment of the Alleged Lunatic's Friend Society in England in 1845, and the later publication of Clifford Beer's (1923) book, *A Mind That Found Itself*, which chronicled abuses in the treatment of persons with psychiatric disabilities at that time. More recent influences contributed to the rise in consumerism beginning in the 1970s. Chief among these factors were deinstitutionalization, widespread dissatisfaction with traditional psychiatric care, and the growth of self-help approaches for personal problems.

The deinstitutionalization movement was fueled by the combined effects of the spiraling costs of state hospital treatment, over-optimism about the benefits of newly discovered medications, and growing public recognition of the deplorable treatment of persons cared for in custodial settings, typified in popular culture by movies such as the *Snake Pit* and *One Flew Over the Cuckoo's Nest* (Baldessarini, 1985; Deutsch, 1948; Johnson, 1990). As state hospital beds plummeted and the average length of stay decreased, vast numbers of consumers were returned to (or remained in) the community. However, as inadequacies of the community mental health system became apparent, many consumers began to vocalize their dissatisfaction. The list of shortcomings attributed to this system is extensive and includes: the failure to attend to the values, goals, and individual preferences of consumers; overpathologizing normal problems; lack of respect for consumers in care provider relationships; stigma; ignoring consumers' expertise; coerciveness; and encouraging consumers to passively accept their roles as "mental patients" (Blaska, 1990; Campbell, 1997; Chamberlin, 1978; Deegan, 1990). This dissatisfaction led to collective action by consumers based on the belief that there must be a better way to help individuals manage and recover from their problems.

The rise of the consumer movement coincided with the self-help revolution in the 1970s (Gartner & Riessman, 1977; Kurtz, 1988; Santrock, Minnett, & Campbell, 1994). For "survivors" of psychiatric treatment, often individuals with psychiatric disabilities who had been committed to institutions and who struggled against the mental health establishment, self-help represented the ideal alternative to a hierarchical and oppressive system (Chamberlin, 1978). Fundamental assumptions of peer support were that persons with like experiences could provide better supports and that safe environments, controlled by peers instead of professionals, offer more honesty and openness in relationships. For some, involvement in self-help was viewed as a complement to, rather than a substitute for, usual care, with the aim of establishing collaboration and mutual respect between consumers and professionals (Kaufmann, 1995; Toro et al., 1988; Wollert, Knight, & Levy, 1980). Thus, within the consumer movement, illness self-management became viewed by some as a method of freeing persons from the coercive and dehumanizing clutches of the mental health system.

Research Supporting Illness Self-Management

Teaching individuals how to better manage their psychiatric disability, and to reduce its effects on their lives, is a complex enterprise for which a wide-range of strategies has

been developed. The most commonly employed approaches that enjoy empirical support include educating individuals about mental illness and its treatment, enhancing medication adherence, relapse prevention training, and cognitive behavioral therapy for persistent symptoms. This section describes the rationale and nature of these approaches to self-management, and the research evidence supporting them. We then describe several comprehensive illness self-management programs that combine two or more of these approaches, and the support for those approaches.

Education

People need basic information about their disorder and the available treatments for it in order to make informed decisions. Education (also called psychoeducation) is perhaps the most widely used approach for accomplishing this goal. Educational teaching is distinguished from other teaching approaches, such as cognitive-behavioral approaches, by its reliance on didactic, rather than experiential (e.g,. role playing, practicing) teaching methods.

Education about mental illness is also a common characteristic of most family intervention programs (Anderson, Reiss, & Hogarty, 1986; Falloon, Boyd, & McGill, 1984; Kuipers, Leff, & Lam, 2002; Mueser & Glynn, 1999). Family psychoeducation is aimed at helping relatives, including the consumer, to learn how to manage the psychiatric disability in collaboration with the treatment team. Therefore, some of the goals of family psychoeducational programs overlap considerably with individual illness self-management programs.

Education is frequently incorporated into comprehensive treatment programs aimed at improving illness self-management for psychiatric disabilities (Atkinson, Coia, Gilmour, & Harper, 1996; Gonzalez-Pinto et al., 2004; Hogarty et al., 1997a; Hogarty et al., 1997b; Hornung, Feldman, Klingberg, Buchkremer, & Reker, 1999). However, research on these programs is not informative as to specific benefits of education because any improvements favoring a comprehensive treatment program could be to other non-educational components of that program. Understanding the effects of educational interventions could be further clouded by the fact that some programs which are described as "educational" in fact include other treatment components as well. For example, Atkinson and colleagues (1996) developed an intervention they described as *psychoeducational* but which included extensive problem solving as well.

In a review of research on illness self-management, Mueser and colleagues (2002) identified 12 randomized controlled trials of specific educational interventions. The results of these studies suggested that people with psychiatric disabilities learned and retained information about their psychiatric disorders and treatment, but that other outcomes such as symptom severity and relapses and rehospitalizations were unaffected. These findings lead the authors to conclude that educational approaches alone were insufficient for improving the ability of consumers to manage their psychiatric disabilities. Similar conclusions were reached by an earlier review of educational

interventions for schizophrenia (Merinder, 2000) and medication adherence (Zygmunt, Olfson, Boyer, & Mechanic, 2002).

Enhancing Medication Adherence

Problems with adherence to treatment recommendations are among the greatest challenges mental health practitioners face in working with persons with psychiatric disabilities (Fenton, Blyler, & Heinssen, 1997). These problems are especially troublesome with respect to psychotropic medications because they are one of the most effective treatments available for psychiatric disabilities (Schatzberg & Nemeroff, 2001). While estimates vary, there is abundant evidence that the majority of people with a psychiatric disability are not adherent to their medication at some point in their disorder (Breen & Thornhill, 1998). Since non-adherence is especially common early during the course of treatment (Coldham et al., 2002), poor medication adherence is related to a number of negative illness outcomes, including more severe symptoms and more frequent relapses and rehospitalizations (Hunt, Bergen, & Bashir, 2002). Therefore, improving medication adherence is a common goal of illness self-management programs.

A number of strategies have been developed to address this problem, including educating consumers about the benefits of medication, use of motivational interviewing, skills training, behavioral tailoring to incorporate medication into the individual's daily routine, simplifying the medication regimen, using medication devices to keep track of when and what pills to take, and simply delivering medication directly to consumers and watching them take it.

Several studies have been conducted that have focused exclusively on strategies for improving medication adherence (Mueser et al., 2002). Behavioral tailoring has been most extensively studied, with four out of four randomized controlled trials showing that it improves medication adherence (Azrin & Teichner, 1998; Boczkowski, Zeichner, & DeSanto, 1985; Cramer & Rosenheck, 1999; Kelly & Scott, 1990). A few studies have examined a well-standardized motivational interviewing intervention, called *compliance therapy*. The first randomized controlled trial of this intervention was very encouraging and showed that in addition to improving medication adherence, it resulted in lower symptoms and fewer hospitalizations (Kemp, Hayward, Applewhaite, Everitt, & David, 1996; Kemp, Kirov, Everitt, Hayward, & David, 1998). Furthermore, because of the high cost of inpatient treatment, the intervention was cost-effective and resulted in an overall net savings due to the reduced costs of hospitalization (Healey et al., 1998). However, an attempt to replicate these findings in another randomized controlled trial was unsuccessful (O'Donnell et al., 2003). There are few clues from the published reports as to why the intervention was effective in the first study but not the second.

Only one small-scale study has been examined to evaluate the effects of skills training on improving medication adherence (Dekle & Christensen, 1990). The results of this study were inconclusive. Finally, one controlled trial has demonstrated that

simplifying the medication regiment is effective at improving medication adherence (Razali & Yahya, 1995).

In summary, the simplest and most efficient approach to improve medication adherence, behavioral tailoring, has also been found to be the most effective one. The results suggest that cognitive limitations associated with mental illness may contribute to adherence problems which can be overcome by making environmental modifications that incorporate cues to take medication into one's daily routine. This method is similar to other approaches aimed at improving adaptive functioning in persons with severe mental illness by environmental modifications designed to compensate for cognitive limitations (Velligan et al., 2000).

Relapse Prevention Training

Symptom relapses typically occur gradually over a period of several days and weeks. For many individuals, these relapses only affect functioning when they are severe and untreated, and therefore helping consumers prevent relapses is an goal of illness self-management. Symptom relapses are often preceded by small changes in cognition, mood, and social behavior, such as difficulties with concentration, feeling more anxious or depressed, and withdrawing from other people. The gradual onset of symptom relapses provides opportunities to teach individuals how to recognize their early signs of relapse and to take action to avert a full-blown relapse.

Relapse prevention training is a systematic approach to educating people about the nature of relapses, their early warning signs, how to identify possible triggers of relapses (such as holidays), identifying and monitoring personal early warning signs, and establishing a relapse prevention plan for responding to early warning signs of relapse. Because relapses often involve the loss of insight into the illness, having significant others play a role in developing a relapse prevention plan is common. Furthermore, developing relapse prevention plans is a common component of family psychoeducational programs. Plans for responding to the early signs of a relapse vary according to the specific circumstances of the individual, but often include contacting a member of the treatment team in order to obtain a temporary increase in medication, which can stave off a relapse (Herz, Glazer, Mirza, Mostert, & Hafez, 1989). Once a relapse prevention plan has been established, it is written down, shared with significant others (when appropriate), and different parts of the plan are rehearsed.

The results of multiple randomized controlled trials of teaching relapse prevention strategies support the effectiveness of this approach (Mueser et al., 2002). The relapse prevention programs studied have varied in their length and comprehensiveness. For example, Perry and colleagues (1999) developed a six week relapse prevention program aimed at teaching people with bipolar disorder how to prevent recurrent episodes, and showed that their program was effective over one and two year follow-ups. In contrast, Herz et al. (2000) developed a relapse prevention program for people with schizophrenia which involves weekly meetings over a one year period and support groups aimed at helping people both track, recognize and respond to the early warning signs of a relapse,

and for improving their ability to manage common triggers of relapse, such as increased stress. This program was shown to reduce both relapses and rehospitalizations.

Coping Skills Training and Cognitive Restructuring

Consumers with psychiatric disabilities often experience persistent, troubling symptoms, such as psychotic symptoms (e.g., hallucinations, delusions), mood problems (e.g., depression, anxiety), negative symptoms (e.g., apathy, anhedonia), and cognitive difficulties (e.g., problems with concentration and memory). These symptoms can be both psychologically distressing and contribute to functional impairment. Helping people cope with or overcome persistent symptoms is an important goal of most programs aimed at helping consumers manage their mental illness more effectively. Coping skills training and cognitive restructuring are two commonly used approaches to helping consumers manage or overcome persistent symptoms.

Coping skills training is a broad approach to enhancing the ability of people to manage persistent symptoms through the identification and practice of specific coping strategies. The approach evolved out of research on how people with persistent symptoms successfully manage those symptoms. Numerous first person reports describe a wide range of different coping strategies that people naturally employ to deal with symptoms (Carter, Mackinnon, & Copolov, 1996; Falloon & Talbot, 1981; Foster & Gallagher, 1986; Wahass & Kent, 1997). These accounts, and research on the use of different coping strategies among people with psychiatric disabilities, shows that the more coping strategies a person reports using, the more effective their coping efficacy (Falloon & Talbot, 1981; Mueser, Valentiner, & Agresta, 1997). Therefore, an important aim of enhancing coping skills is to increase the number and variety of coping strategies people are able to use for managing persistent symptoms.

There are a variety of different ways of enhancing coping skills. Some educational programs review different coping strategies, but do not systematically attempt to teach consumers how to use those strategies. More comprehensive learning-based approaches to enhancing coping skills employ cognitive-behavioral techniques in order to, (1) identify and monitor troubling symptoms, (2) select coping strategies and to model and rehearse them in sessions, and (3) develop homework assignments to help consumers to practice the skills on their own (Tarrier, 1992). These approaches seek to both reinforce and increase the ability of consumers to use coping skills that are already in their repertoire, and to increase that repertoire by teaching additional skills.

Cognitive restructuring is a set of cognitive-behavioral techniques that help people examine thoughts and beliefs that contribute to negative feelings or dysfunctional behavior (Beck, 1995). The primary assumption underlying the use of cognitive restructuring is that people's reactions to different situations in their lives are determined in large part by their thoughts and beliefs in those situations in particular, and about the world and themselves in general. Thus, two people will react to the same situation in very different ways if their perceptions or thoughts about the situation differed markedly. Since different thoughts are possible in any given situation, some thoughts may be more

accurate than others, and some negative emotions (or dysfunctional behaviors) may stem from these inaccurate thoughts. Cognitive restructuring is a strategy for helping people become more aware of their thoughts and beliefs in different situations, and challenging those thoughts that are associated with strong negative feelings.

Abundant research supports the effectiveness of teaching strategies for enhancing coping, as well as broad-based cognitive-behavior therapy that includes cognitive restructuring for consumers with persistent symptoms. In a review of coping skills enhancement studies, Mueser et al. (2002) reported that five out of five controlled studies found significant benefits in terms of reduced symptom severity or distress. Even more studies have been conducted examining the effectiveness of cognitive-behavioral treatment (with an emphasis on cognitive restructuring) for persistent psychotic symptoms (Gould, Mueser, Bolton, Mays, & Goff, 2001; Pilling et al., 2002).

Illness Self-Management Programs

Over the past two decades a number of programs have been developed to teach consumers how to better manage their psychiatric disabilities. In this section we describe several well standardized and widely available programs, and the research evidence supporting them.

UCLA Symptom Management Module

The Medication Management and Symptom Management modules are two of eight different skills training modules that form the Social and Independent Living Skills (SILS) Program developed by Robert P. Liberman, Charles Wallace, and colleagues at UCLA (Kopelowicz & Liberman, 1994). These programs were developed for persons with a psychotic disorder with the aim of providing them with basic information about the pharmacological and psychosocial management of schizophrenia, the prevention of relapses, and coping with persistent symptoms. Other modules in the program include Basic Conversational Skills, Recreations for Leisure, Community Re-entry (for inpatients anticipating discharge to the community), Substance Abuse Management, Workplace Fundamentals, and Friendship and Intimacy.

All modules within the program are taught using the principles of social skills training (e.g., modeling, role playing, etc.) based on video demonstrations of topic areas and skills (Liberman, DeRisi, & Mueser, 1989). Once skills are acquired through modeling and repeated practice, *in vivo* and homework exercises are used to promote generalization of the skills in the consumer's natural environment. The modules are designed to be provided in a group format, although they can also be taught individually. Each module includes a core set of instructional materials, including an instructor's manual, participants' workbooks, a demonstration video, and fidelity and outcome measures. For the Medication Management module, teaching is organized around four topic areas: the benefits of medication, self-administration and self-monitoring of medication effects, coping with side effects, and negotiating medication issues with health providers. The Symptom Management module teaching is organized around four

skill areas: identifying early warning signs of relapse and seeking early intervention, devising a relapse prevention plan, coping with persistent symptoms, and avoiding substance abuse. Duration of time to complete each module depends on the frequency of sessions and level of functioning of participants, with 3-6 months of twice weekly sessions required for outpatients. To enhance motivation throughout the training process, participants are encouraged to set specific goals for themselves and answer the question, "How might you benefit from learning this skill"?

A significant amount of research has been conducted on the Medication Management and Symptom Management modules, often provided in the context of skills training in other areas. Research on the dissemination of modules in the SILS Program indicate that clinicians can implement the modules with high fidelity to the program (Wallace, Liberman, MacKain, Blackwell, & Eckman, 1992). The Trainer's Manuals are designed to be structured and specific such that virtually anyone, regardless of special training or educational degree, can teach them. A study of the SILS modules adopted in 16 programs indicated that residential care facility owners, corrections officers, and psychiatric technicians were effective as mental health professionals in teaching the skills, and that fidelity to the module as written was more important than background of the trainer (Corrigan, MacKain & Liberman, 1994). Controlled research also shows that consumers who participate in the Medication Management and Symptom Management modules acquire and retain the targeted information and skills over one year, compared to other non-skill interventions (Eckman et al., 1992; Wirshing, Marder, Eckman, Liberman, & Mintz, 1992).

Some controlled research also supports the effects of skills training using these modules. One controlled study comparing intensive skills training on these modules over six months with occupational therapy, showed significantly greater improvements in independent living skills for the skills training groups (Liberman et al., 1998). A second controlled study showed that skills training based on these modules for six months, followed by 18 months of skills training on other topic areas, was associated with better social adjustment at two years compared to equally intensive supportive therapy (Marder et al., 1996). Two additional controlled studies using these and other skills training modules have demonstrated the utility of involving indigenous community supporters (Tauber, Wallace, & Lecomte, 2000) and augmenting clinic-based training with training in the community (Glynn et al., 2002) in improving social functioning. Interestingly, across all four studies there have been no differences between groups in changes in symptom severity, relapses, or rehospitalizations. It should be noted that these studies have focused on stable outpatients who may be at relatively low risk for relapse.

The SILS modules appear to be relevant in and adaptable to a variety of cultural contexts. The materials have been translated into 17 different languages and have been implemented effectively in countries such as China, Japan, Switzerland, and Norway (Liberman, 1998). In a study with Latino community mental health outpatients in California, materials from the Symptom Management and Medication Management modules were adapted to be more culturally relevant by involving family members to promote generalization of illness management skills (Kopelowicz et al., 2003).

Personal Therapy

Personal Therapy is an individual psychotherapeutic approach developed by Hogarty and his colleagues (1995) for persons with schizophrenia or schizoaffective disorder. The primary goal of the program is to help consumers attain and maintain clinical stabilization, although the therapy also strives to help them improve their psychosocial and occupational functioning. Therapy is usually initiated following a relapse or rehospitalization, hence its focus on restablization. Sessions are generally conducted weekly for the first year and biweekly or less often for another two years. The standard program is detailed in a book (Hogarty, 2002).

Personal Therapy is divided into three phases with specific guidelines for progressing from one phase to the next. The basic phase of Personal Therapy begins with the therapist engaging the consumer in treatment, establishing a therapeutic relationship (and connecting with family if involved), and developing a treatment plan. The program then proceeds to provide psychoeducation about schizophrenia and its treatment, to make plans for the consumer to begin resuming tasks and responsibilities, and to begin with the development of internal coping strategies for managing stress. The phase ends with social skills training to help consumers avoid conflict situations and to initiate positive interactions with others. Hogarty (2002) notes that the basic phase of Personal Therapy could stand alone as a comprehensive management approach to schizophrenia. The intermediate and advanced phases of therapy are essentially extensions of the basic phase. Further psychoeducation is provided with refinement of ability to recognize and cope with internal signs of stress. Work continues on resuming tasks and roles, and additional skills are taught pertaining to social perception and social skills. The advanced phase continues the work of the previous phases, with additional skills taught, including the use of imagery and conflict management, with further attention to social and vocational role development.

Two controlled studies were conducted concurrently on Personal Therapy, one for consumers living with family members and another with consumers living independently (Hogarty et al., 1997a; Hogarty et al., 1997b). In one study (Hogarty et al., 1997a), consumers were randomly assigned to family psychoeducation based on the model of Anderson et al. (1986), Personal Therapy, supportive therapy, or Personal Therapy plus family psychoeducation. In the other study (Hogarty et al., 1997b), consumers were assigned to either Personal Therapy or supportive therapy. Personal Therapy was found to reduce psychotic relapses for consumers living at home, but was associated with higher relapse rates than supportive therapy for consumers living on their own. The authors interpreted the higher relapse rate among the consumers living independently to frequent housing problems and conflict with landlords in this group mainly during the first year, and suggested that the additional stress associated with therapy may have contributed to the relapses. However, over the three year follow-up, Personal Therapy was associated with significantly greater improvements in overall symptom severity, adjustment, and work.

Illness Management and Recovery (IMR)

IMR was developed with support from the Robert Wood Johnson Foundation and the Substance Abuse and Mental Health Services Administration (SAMHSA) as one of five evidence-based psychosocial implementation "toolkits" for psychiatric disabilities (Drake et al., 2001; Mueser, Torrey, Lynde, Singer, & Drake, 2003). IMR was created based on a comprehensive review of controlled research on illness self-management approaches (Mueser et al., 2002). This review identified five components of illness self-management that were supported by evidence, including psychoeducation, behavioral tailoring for medication adherence, relapse prevention training, social skills training for social support, and teaching coping skills for persistent symptoms. In order to motivate consumers to learn how to manage their psychiatric disability, individual recovery goals are identified at the outset of the program, and are pursued throughout, with improved illness self-management skills conceptualized as helping to achieve those goals. IMR can be delivered in either an individual or group format and generally requires 6-10 months to complete, depending on the frequency of sessions and level of impairment of the participants (Gingerich & Mueser, 2005).

The curriculum for IMR is organized into ten different modules or topic areas, including:

1. Recovery strategies
2. Practical facts about mental illness
3. Stress-vulnerability model and treatment strategies
4. Building social support
5. Using medications effectively
6. Reducing relapses
7. Coping with stress
8. Coping with problems and persistent symptoms
9. Getting your needs met in the mental health system
10. Drug and alcohol use (optional)

Each topic is taught using a combination of educational, motivational, and cognitive-behavioral teaching strategies. Motivation to learn the different components of illness self-management is integrated throughout the IMR program by helping consumers link specific information and skill areas to achieving personal recovery goals, and weighing the "pros" and "cons" of changing specific health-related behavior versus maintaining the status quo. The IMR program includes a series of educational handouts for consumers (one for each module), a manual for clinicians, information brochures (for consumers, family members, clinicians, policy makers), an introductory video for the program, a training video for clinicians, a fidelity scale, and outcome measures. To enhance the cultural competence among clinicians, guidelines for tailoring IMR and other evidence-based practices to meet the needs of culturally diverse consumers are also part of the Implementation Resource Kit. All of these materials are free of charge. All the materials can be downloaded from the web at www.mentalhealth.samhsa.gov, except the tenth module on Drug and Alcohol Use (which is available from the first author upon request) and the videos (which can be obtained by writing SAMHSA and requesting a

copy of the IMR Implementation Resource Kit). An educational curriculum (module 2) has been developed for schizophrenia-spectrum and mood disorders, although the rest of the curriculum is not specific to psychiatric diagnoses.

Practitioners who provide the IMR program may come from a variety of different backgrounds, with no specific educational requirements for teaching the program. For example, case managers, psychologists, social workers, nurses, occupational therapists, and trained consumers have all become experienced practitioners of the IMR program. The provision of IMR services is most effective when practitioners receive weekly supervision, either individually or in group, provided by an IMR supervisor who has experience with the program. Group-based weekly supervision meetings provide opportunities for practitioners to get feedback and suggestions from others on their cases, to learn additional skills related to providing IMR, and share their experiences delivering the program with other practitioners who can support them in their efforts. Fidelity to the principles of IMR is assessed using a standardized fidelity measure. This is administered at the program level by trained fidelity assessors who tap a variety of different sources of information, including interviews with supervisors, practitioners, and consumers, as well as record reviews.

Although IMR was developed based on a review of evidence-based practices for illness self-management, research has not yet evaluated the effectiveness of the program. Several controlled studies of IMR are currently underway.

Wellness Recovery and Action Plan (WRAP)

WRAP was developed by Mary Ellen Copeland as a general, standardized program for helping individuals with recurring health and emotional problems develop healthier and more rewarding lives (Copeland, 1997; Copeland, 1999; Copeland & Mead, 2004). WRAP is a structured system in which an individual or group of persons is guided through developing a personal written plan for managing or reducing troubling symptoms as well as making other desired changes in one's life. WRAP is oriented towards helping anyone with physical or mental health problems regain control and balance in their life, and therefore it avoids providing information about specific disorders, including treatment principles. Rather, as the title suggests, the emphasis is on wellness and health.

The WRAP program is divided into seven components with each one including written plans that the consumer maintains in a workbook:

1. Creating a daily maintenance plan
2. Identifying triggers, early warning signs, and signs of potential crisis
3. Developing a crisis plan
4. Establishing a nurturing lifestyle (e.g., more healthy living)
5. Setting up a support system and self-advocacy
6. Increasing self-esteem
7. Relieving tension and stress

Teaching is typically done through a combination of lecture and discussion, with time taken to complete the plans and receive advice and support. WRAP is usually provided by trained consumers, who often use their own experiences in order to inspire other consumers that they can recover their wellness.

Controlled research has not been conducted on WRAP.

Team Solutions

Team Solutions is a psychoeducational program for schizophrenia developed by the Eli Lilly Company, designed to teach consumers about the nature of the disorder and its treatment. The program is standardized and includes a video, a trainer's manual, educational handouts and worksheets for consumers (Scheifler, 2000). Teaching can be conducted on an individual or group basis, with approximately 4 months of weekly sessions required to cover the material.

The curriculum in Team Solutions covers the following topics:

1. Understanding your illness
2. Understanding your symptoms
3. You and your treatment team
4. Recovering from schizophrenia
5. Understanding your treatment
6. Getting the best results from your treatment
7. Helping yourself prevent relapse
8. Avoiding crisis situations
9. Coping with symptoms and side effects
10. Managing crisis and emergency situations

One controlled study has been conducted on the Team Solutions program (Vreeland et al., Submitted). This study compared participation in Team Solutions with treatment as usual, and included a 6-month post-treatment assessment. The results showed that consumers in Team Solutions demonstrated significant improvements in their knowledge of schizophrenia and its treatment, but there were no differences between the groups in either symptoms or community functioning.

Different illness self-management programs complement one-another in focus and approach. The *IMR program* is a flexible approach that builds on clinicians' existing skills and incorporates the basic competencies that underlie all evidence-based practices, including shared decision-making and teaching based on educational, motivational, and cognitive-behavioral strategies. The *SILS program* employs rigorous state-of-the art skills training techniques to teach self-management and interpersonal skills, including guidance for enhancing consumers' effectiveness through demonstration videos and role play practice. The *WRAP program* combines inspiration provided by peers with mental illness who have had similar experiences and have taken control of their lives, with practical suggestions and tools for developing one's own personal wellness plan. *Team*

Solutions' focus on psychoeducation provides consumers with information that is essential to effective management of their illnesses.

Application for Consumers in the Criminal Justice System

A subcommittee on criminal justice from the President's New Freedom Commission on Mental Health (2004) identified effective intervention "responses" or calls for program development to address the needs of offenders with mental illness in the following settings:

- *Diversion programs* to keep minor offenders with severe mental illnesses out of the criminal justice system where they do not belong
- *Services in correctional facilities* for those with severe mental illnesses whose crimes are serious enough to warrant incarceration; and
- *Discharge planning* aimed at linking people with severe mental illnesses to community-based services upon release from correctional institutions.

The content and structure of illness self-management training programs appears to fit within each of these domains. Mental health courts and diversion programs have the potential to engage consumers in illness self-management training in a way that could prevent subsequent involvement in the criminal justice system. Although jail stays are typically brief, this setting is appropriate for evaluating consumers' mental health needs and to begin the engagement process around illness self-management training. Prisons provide longer term opportunities for more intensive training and potentially more comprehensive rehabilitation services, some examples of which are described below. Planning for discharge and community re-entry is particularly critical in linking offenders with a mental illness to community services, peers, and other supports that will foster continued engagement in illness self-management training.

Despite this seemingly natural fit between training in illness self-management and involvement in the criminal justice system, there is little published work that documents the use of these types of interventions in jail diversion programs or mental health courts, jails or prisons, or community/correctional settings. Perhaps due to the similarity in structure to public psychiatric hospitals, correctional institutions appear to be the most likely to implement illness self-management training programs. However, although diagnostic and screening procedures may correctly identify many offenders in need of mental health services, few receive care beyond medication or assignments to separate housing (Beck & Maruschak, 2001; National Institute of Corrections, 2001). In addition, adherence to prescribed medications is largely left to the inmate, and the symptoms and disabilities related to severe mental illness are often a formula for poor adjustment to prison life (Toch & Adams, 1988). Inmates with mental illness are more likely to have behavior problems, to be victimized by higher functioning inmates, experience greater difficulty understanding and following rules (Adams, 1986; Jemelka, Trupin, & Chiles, 1989; Lovell & Jemelka, 1998), and are more likely to have disciplinary problems (Ditton, 1999). The solution in some jurisdictions is to transport inmates with mental illness who are difficult to manage to one of the few prison inpatient facilities. The management of these inmates often incurs substantial additional costs due to

transportation and the higher cost of inpatient treatment in the prison setting. In the community, this strategy of shuffling hard-to-treat individuals with mental illness from place to place, in hopes that they will someday "land" in an ideal treatment environment, is sometimes termed "Greyhound therapy." Because that desired placement is rarely found, correctional systems are recognizing the value of providing more varied levels of care for inmates with mental illness (Beck & Maruschak, 2001; National Institute of Corrections, 2001).

Levels of Care and Opportunities for Programming in Prisons

Historically, prison systems have made available mental health services at the two extremes of the continuum: inpatient/hospitalization, and outpatient services among the general population. To address the complex needs of inmates with mental illness and to provide appropriate services in the least restrictive setting, some states have developed a multi-tiered system. The levels may include: (1) *inpatient* or *hospitalization* units, for assessment and crisis stabilization; (2) *residential care*, where somewhat stabilized but still-fragile inmates are housed in a 24-hour lock down facility of single or 2-bed cells; (3) *day treatment* or *intermediate care*, to provide programming in a less restrictive (and less expensive) environment in order to prepare inmates to return to the general population of inmates where they can maintain a steady work or school assignment and reduce the chances of re-hospitalization; and (4) *outpatient services*, which may be available to the general population of inmates to provide medication monitoring in some cases, and to assist inmates in maintaining mental health (MacKain & Messer, 2004).

Intermediate care, alternately termed *intensive outpatient* or *day treatment* care, tends to be an underutilized, yet viable option in correctional settings (Condelli, Dvoskin, & Holanchock, 1994). For years, intermediate-level programs have been an integral component of behavioral health services (Kiser, King, & Lefkovitz., 1999). The day treatment approach in prison settings promotes daily contact with treatment staff in dormitory or other group housing settings that allows inmates with mental illness to have more personal freedom and social interaction than they would probably otherwise have in inpatient facilities. This less restrictive delivery of care encourages inmates to take responsibility for the choices involved in daily living and promotes independence through enhanced social, vocational, academic, and leisure skills. Inmates at this level can tolerate a group format, are known to benefit from the structured environment intermediate care provides, and have more opportunities for *in vivo* skills practice and environmental support. Therefore, it is not surprising that illness self-management-related programming is a natural fit at the intermediate care level, and that all of the prison-based illness self-management programs described in this review are offered at the intermediate care level.

Published Descriptions of Programs for Offenders with Severe Mental Illness

Although there are numerous reports describing the structure and administration of effective mental health programs that are most likely to meet the needs of offenders with severe mental illnesses, few published papers provide detailed information about the settings, goals, or content of treatment approaches used to help offenders manage symptoms and their illnesses. It is possible that many forensic facilities are doing this kind of work, but we could find only three *published* articles in the mental health or criminal justice literature that provided enough information to classify the program as related to the evidence-based practices that comprise illness self-management described above (Mueser et al., 2002): psychoeducation, behavioral tailoring for medication adherence, symptom relapse prevention training, social skills training for social support, and teaching coping skills for persistent symptoms. Likewise, a search of the database in the Directory of Program Profiles provided by the GAINS Center yielded no program descriptions whose content or approach related to IMR.

Published reports on these three programs, all administered in prisons, describe detailed efforts to offer illness management and recovery treatment services to inmates with severe mental illness. None of the programs used the Illness Management and Recovery (IMR) program, which likely in part reflects the fact that the program was not available until 2002. However, all of the programs appear to embrace a psychosocial rehabilitation approach and share much of the content in common with IMR (e.g., education about mental illness, using medications effectively, reducing relapses, coping with persistent symptoms, negotiating medication issues with care providers).

The articles also report data or plans for program evaluations. All have the same methodological limitations, such as the lack of control groups and other challenges common to research in correctional environments, and all found creative ways to address important questions, including "Is it *feasible* to implement mental health programming that aims to empower mentally ill inmates to better manage their own illnesses?", "What are the *effects* –short and long-term—of these treatment programs on inmate functioning, management, and quality of life?", and "What might be the cost-savings that could result from such programming?"

The California Medical Facility at Vacaville

In response to a consent decree, the California Department of Mental Health assumed operation of three wings of the California Medical Facility to provide acute and day treatment services to inmates with severe mental illness (MacKain & Streveler, 1990). Treatment efforts were aimed at psychiatric rehabilitation of the individual and were not specifically directed at rehabilitating criminal behavior. Of the 9,000 beds in the facility, 210 were designated for the Mental Health Program. Inmates received graduated levels of services, moving from the Admission/Stabilization (Q) wing (90 beds), to the intermediate, Skills Development (S) wing (60 beds), and finally to the Day Treatment (A) wing (60 beds) where they engaged in illness self-management and independent living skills training, skill integration, and generalization activities. The modules from the Social and Independent Living Skills series (Kopelowicz & Liberman, 1994), served as the core of the curriculum. Because the most acutely ill inmates on Q

wing could not tolerate much group work, they received "Pre-SILS training" that aimed at enhancing motivation and attentional skills to ready them for transfer to the "S" wing for further training in medication management, symptom management, and social skills. Inmates on "A" wing participated in SILS groups also, but had more options for off-unit activities and were involved in pre-release planning.

To teach staff how to conduct SILS and other training groups, 35 social workers, registered nurses, medical technical assistants, psychologists, and occupational, art, music, and recreation therapists attended a 3-day workshop. Activities included demonstration, guided practice, and discussions regarding charting inmate progress and program evaluation. Following the workshop, a SILS project coordinator was selected for each of the 7 units, and trained staff volunteered to offer various modules on their respective units. Some staff were assigned specific groups, so all would be covered. Within 5 weeks of the workshop, each unit offered at least one, and as many as five SILS groups twice a week. Group size ranged from 4 to 12, and most groups had two leaders.

A preliminary study of 45 inmates who received the Medication Management module indicated that those who had attended at least 18 sessions of training knew more about their medications than participants with fewer sessions, and could perform role plays of medication-related skills more effectively. For example, inmates with training scored significantly higher on a role play test item requiring them to demonstrate the steps (e.g., reading the medication label aloud) involved in taking medications safely and correctly. Medication adherence for both groups was 100%, probably due to unit policies requiring medication adherence. More research was planned for the facility, but was not completed due to administrative changes.

Brown Creek Correctional Institution

Another prison-based program that used a psychosocial rehabilitation model delivered at an intermediate level of care was the Social Skills Day Training program at Brown Creek Correctional Institution in North Carolina (MacKain & Messer, 2004). Established in 1992 to prepare inmates with mental illness for successful integration into the regular prison population, the program used the SILS modules to teach medication and illness management, problem solving, communication, recreational and community re-entry skills. The program was recently terminated after 11 years due to reported funding, staffing, and logistical issues.

The 78-bed program within the 900-bed institution was designed for inmates with relatively stable but severe mental illnesses who were able to tolerate dormitory-style housing but were unable or thought to be unlikely to function well among the general population of inmates. Participants were typically referred by psychologists from processing units shortly after sentencing, or by psychologists at outpatient, residential, or inpatient programs within the prison system. Over a 10-year period, the Day Training Program admitted 700 inmates. Most had a primary diagnosis of schizophrenia or other psychotic disorder (70%), although some had mood, anxiety, or organic disorders. The mean IQ among participants was 82, and the majority had co-occurring disorders in

addition to their mental illness, including co-morbid intellectual deficits (15%), personality disorders (55%), and substance use disorders (66%). The ethnic breakdown paralleled that of the general prison population in North Carolina, with 66% of program participants being African American, 32% White, and 2% Asian American.

The Day Training Program was comprised of two stages: Phase 1, a highly structured, comprehensive psychosocial skills training program that typically took 6-8 months to complete; and Phase 2 for a subset of inmates who had completed Phase 1, but were not ready for transfer to the general population. The curriculum in Phase 1 consisted of three of the SILS modules: Medication Management, Symptom Management, Basic Conversation Skills, and Recreation for Leisure. The curriculum was designed to promote the transfer of acquired skills to a range of situations and other settings, and staff made efforts to prompt and reinforce self-monitoring and social skills on and off the units. Inmates in Phase 2 were generally seen as more disabled and were assigned to a sheltered workshop, received "booster sessions" from the Symptom and Medication Management modules, and would have been allowed to stay in the program indefinitely had it continued.

In Phase 1, two masters-level Behavior Specialists each conducted two SILS groups per day, teaching the skills in groups consisting of seven to ten inmates. Inmates attended two module groups per day, 4 days each week, for 1.5 hours per module. Inmates spent one-half day in SILS classes and the other half-day engaged in horticultural activities or other classes, such as current events. On the fifth day, inmates attended treatment team meetings and appointments at the psychiatric clinic. On this day, participants received rewards such as popcorn and beverages, and were given additional opportunities to practice social and recreational skills.

The program was operated with minimal space and staffing. The SILS groups most frequently met in the Programs building, but were sometimes offered in the dormitories, which were empty during the day. Over and above the required staffing for a general population unit, the Day Program staff had two additional full-time licensed psychological associates, one full-time and one part-time rehabilitation therapists, three full-time bachelor-level behavior specialists, and a psychiatrist for 8 hours per week.

In the evening, Day Training Program inmates were housed in dormitories of 26 beds each. When not in scheduled classes, Day Training inmates were considered to be part of the general population, allowing for participation in institutional activities such as religious programs, Alcoholics Anonymous, and night classes. Participation in institutional activities was instrumental in facilitating the transition to general population. Within the general population setting, inmates gained a sense of normalcy, exercised more freedom of choice, and enjoyed greater freedom of movement.

By the end of Phase 1 of the Day Training Program, inmates were expected to be able to: (1) understand how their medications work, (2) recognize symptoms, (3) identify

their own warning signs of relapse, (4) develop a relapse prevention plan, (5) increase medication adherence, (6) improve communication skills, and (7) expand leisure skills. These skills were typically assessed before and after participation in the modules, using standard measures provided in the Trainer's Manuals. After completion of the SILS modules, the treatment team recommended either that the inmate be returned to the general population at Brown Creek or at another facility, or that he be admitted to Phase 2 to participate in additional programming.

Data on hospitalizations, behavioral infractions, therapeutic seclusions, and administrative segregations were collected for Phase 1 inmates 6 months prior to admission to Brown Creek and 6 months following admission. Using each inmate as his own control, the data may suggest whether the program at BCCI is successful at reducing the need for inpatient hospitalization and disciplinary sanctions. This approach is modeled after the design used by Condelli and colleagues (1994, 1997) to investigate the impact of intermediate care programs in New York (see below).

A follow-up study of 54 inmates who had participated for a minimum of 4 months (mean of 8 months) in Phase 1 of the Day Program and were transferred to other North Carolina Institutions was conducted to assess overall functioning before and after admission to BCCI, retention of medication knowledge and medication management skills following transfer, as well as satisfaction with treatment (Baucom, 2004). Staff psychologists at the various institutions interviewed former Day Program participants and rated them on the Global Assessment of Functioning (GAF) scale, the Brief Psychiatric Rating Scale (BPRS), and the Clinical Global Impression for severity of illness (CGI1 & improvement (CGI2) subscales. Additionally, the interviewing psychologist asked inmates questions about their own medications and facts pertaining to responsible use of medications (Medication Knowledge test). Finally, inmates were asked informational items and engaged in role plays drawn from the Medication Management module to assess retention of skills related to medication administration. For inmates for whom data were available, pre and post-training scores on the Medication Knowledge and Medication Management tests were compared to scores at follow-up/post-transfer (mean of 10 months after leaving the program).

Results indicated that inmates improved from pre-training to follow-up (post-transfer) on the CGI1 and CGI2, and on the GAF. BPRS ratings were only available post-transfer, and these indicated only mild levels of psychopathology. Medication Knowledge scores increased from pre-training to post-training and showed no significant decrease at follow-up. Medication Management test scores were also higher at post-training as compared to pre-training, but these gains were not retained at follow-up. Medication and symptom management training were not available at these post-transfer sites, and therefore it is not surprising to see an erosion of skills related to these areas over time. The amount of time between transfer from the program and follow-up was not statistically related. A second follow-up of former participants 18 months after the closure of the Day Program has been proposed in order to learn where and at what level the inmates are housed, whether they have been able to maintain a job assignment, and whether they present disciplinary or management problems.

The McNeil Program

The Mental Health Program at McNeil Island Corrections Center is an intermediate care program for inmates with mental illnesses who need residential care but are thought to be capable of adjusting to prison life in less structured settings. Most notably, the program represents a successful collaboration between Washington State Department of Corrections and University of Washington consultants and researchers (Lovell & Jemelka, 1998; O'Connor, Lovell & Brown, 2002). Opened in 1994, the McNeil Program serves 75 inmates in a medium security living unit, and 22 inmates in an intake/segregation wing. Based on a supportive, cognitive-behavioral model that emphasizes skill building, the program offers psychoeducational classes such as stress management, symptom recognition, and relapse prevention. From the earliest planning stages, correctional administrators have consulted with University clinicians and researchers about staffing, program design, and program evaluation.

In one study, Lovell, Allen, Johnson and Jemelka (2001) examined the records of 448 inmates admitted and treated during the first 4 years of the McNeil Mental Health Program. For participants who had received at least 3 months of treatment, comparisons of pre-program and post-program behavior indicated reductions in inmate management problems such as staff assaults, infractions, and assignments to higher levels of care. Additionally, former program participants at the time of transfer or release showed higher rates of job and school assignments and lower levels of symptom severity than when they entered the program. Lovell and colleagues later interviewed 61 former program participants after they had been transferred to other prison facilities. Seventy percent were housed among the general population of inmates, and 30% were assigned to special housing units because they were deemed not to be coping well. In general, participants showed lower levels of symptom severity and expressed praise for the program (Lovell, Johnson, Jemelka, Harris & Allen, 2001). The authors also discuss the complexities of program evaluation and the "dual standards of program success": one standard being behavioral change that will result in a decrease in management problems, or use of special housing resources, the other being the ethical and legal duty to provide quality medical care to inmates with disabilities and who are wards of the state.

Non-EBPs Targeting the Same Outcomes for Criminal Justice Clients

New York State's Intermediate Care Programs

An ambitious research effort to evaluate the impact of intermediate care programs for inmates with severe mental illness was conducted by Condelli, Dvoskin, and Holanchock (1994). Although the programs' content or curricula are not fully described, and therefore can not be determined to be related to illness self-management evidence-based practices, the researchers targeted many of the same outcomes and used the inmate as his own control to assess program impact. This particular research design may be more practical in correctional environments, where the use of randomized control groups is frequently not an option.

The authors studied seven intermediate care programs for inmates with mental illness that were jointly operated by the New York State Office of Mental Health and the Department of Correctional Services. Admission criteria included: (1) a serious diagnosable psychiatric disorder; (2) a significant psychiatric history; and (3) difficulty coping in the general prison environment due to a mental disorder. The operations manual that covered all these programs specified that inmates could not be referred to the program for disciplinary reasons. Each of the programs, located throughout the state, served 60 inmates, shared a psychiatrist with another satellite unit, and was staffed with 3-5 other mental health professionals such as psychologists, social workers, nurses, and recreational and occupational therapists. The article describes program services including milieu therapy, individual and group therapy, recreation therapy, and task and skills training.

Data was collected from 209 inmates who had been in an intermediate care program for at least 6 months in 1988-1989 and who had been in prison for at least 6 months prior to admission to the program. Most (57%) of the inmates were classified with schizophrenia, 15% had adjustment disorders, and 10% had mood disorders. Variables of interest were number of suicide attempts, number and type of behavioral infractions, restriction of privileges, being put on keeplock status, and assignment to segregation or special housing units. Data was also collected regarding the number of times emergency medications were prescribed and the number of days inmates received crisis care at the unit, were placed in seclusion, or were sent to the system's central psychiatric unit. Most of these variables have a direct and immediate impact on correctional department budgets.

All comparisons were within inmates, examining rates during the 6-month period prior to admission to the intermediate care unit, and the 6-month period following admission to the unit. Results indicated significant reductions in very serious infractions (defined as behaviors that could threaten the order of the system or cause physical injury) and suicide attempts, but not in serious infractions (not defined in the article). The number of days inmates were on restricted privileges and keeplock status declined, although not significantly. There were significant reductions in need for crisis care, seclusion, and hospitalization. Need for emergency medication dropped 20%, but this difference was not statistically significant. In a later study (Condelli, Bradigan, & Holanchock, 1997), the authors re-analyzed the data to reveal changes in the distribution of scores on variables assessed in the earlier study. Overall, the authors concluded their findings suggest that the New York Intermediate Care Programs are effective in reducing risk and managing inmate behavior. Although the researchers focused on inmate management and use of resources, rather than on quality of care or mental health status, these issues are of great importance to the corrections field. For example, Lovell and Jemelka (1996) estimated that each disciplinary infraction cost $970 in a medium security prison, suggesting that successful treatment may result in considerable cost-savings.

Future Directions

The literature reviewed here suggests that illness self-management training is relevant to the population of persons with severe mental illness involved in the criminal justice system, and that the flexibility and empirically validated foundation of illness management and recovery programs may make them a good fit for the needs of individuals throughout the treatment continuum. Indeed, considering the increasing trend in recent years towards "criminalizing" persons with mentally illness (Abram, Teplin, & McClelland, 2003; Abram et al., 2004; Teplin, 1994; Teplin, Abram, & McClelland, 1996), illness self-management training that incorporates evidence-based practices, such as the Skills for Independent Living program (Kopelowicz & Liberman, 1994) and the Illness Management and Recovery program (Gingerich & Mueser, 2005), could be effective strategies for reducing recidivism in persons with severe mental illness whose involvement in the criminal justice system is related to poor illness self-management skills. However, despite the apparent need for training in illness self-management in this population, remarkably little is known about what related services are routinely provided, the extent to which evidence-based practices for illness self-management are available, the adaptations necessary to implement these programs in criminal justice settings, and the effects of these programs.

Information about Needs and Current Practices

Although it is possible that structured programs teaching illness self-management skills are available in numerous settings, little information about such programs is published in the clinical or criminal justice research. More needs to be done to stimulate the exchange of ideas and experiences among the stakeholders in mental health and corrections circles, and to support the documentation of such innovations. A formal assessment of the rehabilitation services that are provided to inmates with severe mental illness, including but not limited to illness self-management, is sorely needed.

Opportunities for Delivering Illness Self-management Services Across the System

The Impact of Coerced Services on Treatment Engagement and Efficacy

Although consumers who are in the criminal justice system may be mandated to receive services, one cannot necessarily assume that all individuals receiving mandated treatment *perceive* it as being coercive (Monahan et al., 1995). Furthermore, there is some evidence that mandated treatment may have beneficial effects on the course of mental illness and substance use disorders. For example, a recent study of mandated and non-mandated offenders with mental illness and a substance use disorder indicated that mandated participants spent less time in prison, and were more likely to receive community-based treatment and to decrease drug use (Broner, Mayrl & Landsberg, 2005).

As in outpatient clinics, hospitals, and residential care facilities, consumers in community corrections programs, jails, or prisons may be at varying stages of readiness to change. As described above, illness management and recovery-type programming has

at its core motivational strategies designed to engage participants in the decision to establish personal goals, to become knowledgeable about their illnesses, to learn essential self-management skills, and to develop and pursue their own personal vision of recovery. This approach is intended to at least in part reduce perceived coercion among participants.

Setting-specific Ideas for Implementing Programs in Criminal Justice Settings

Despite the lack of controlled research on illness self-management programs in criminal justice settings, evidence supporting their use in other contexts suggests that they can be adapted to benefit offenders and ex-offenders with mental illness in a variety of settings. As previously discussed, the focus throughout illness management and recovery-related programs is motivational enhancement of consumers, which can reduce perceived coercion and may offset any potential negative impact of mandated treatment. Effective illness self-management skills may lead to fewer disciplinary problems and greater progress towards functional recovery goals, which may yield cost savings in terms of management and housing. Training in illness self-management across multiple services and settings may also serve to "glue" the often fragmented services available for offenders with mental illness, resulting in continuity of care and assuring steady progress through rehabilitation towards recovery. The components of the illness management and recovery-related programs reviewed here can all be adapted to meet the unique demands across institutional and community settings, as described below.

Jails. Considering the brief-to-intermediate length of time individuals may spend in jail, this setting is most appropriate for mental health screening, educating consumers about the basic facts of mental illness and its treatment, and fostering motivation for learning illness self-management skills. Subsequent work on formulating personal recovery goals and competence at illness self-management can be accomplished in either outpatient mental health or prison settings.

Prisons. Illness management and recovery-related programs can be implemented in prison settings, with the combined focus on articulating personal long-term goals and learning the rudiments of illness self-management. As described in the previous section on the evidence base for illness self-management programs in criminal justice settings, longer sentences in prison and ready access to consumers facilitates the engagement of inmates in group- or individual-work aimed at improving illness self-management skills. Each of the published reports of illness self-management programming relate to intermediate-type level of care settings, as the structure and rehabilitation focus may be already established. It is possible to exert more influence over inmates, and to prime the environment to be supportive of inmates developing new skills, when clinicians are present on a unit at least 4 hours per day.

Such programming may be more difficult and expensive to deliver in acute care/inpatient facilities where inmates are less stable symptomatically and where security and medical necessity override other treatment priorities. In settings where mental health

services are delivered on an outpatient basis, it may be necessary to perform outreach services to help engage the inmates who need the services the most. Prison outpatient services tend to be delivered only to those inmates who request them, and staff resources have been allocated accordingly. As is the case in the community, those who have the greatest need for services are often least likely to seek them out, and therefore routine screening, referral, and motivational enhancement to participate in illness self-management training should be the standard. Illness self-management services could be provided on a "booster session" basis through prison-based clinics, and staff could be trained to prompt and reinforce behaviors associated with continued symptom and medication management and recovery.

Community Corrections/Community Mental Health. Illness self-management programming can be implemented with individuals or groups in these settings, other transitional programs, or by Forensic Assertive Community Treatment teams. Illness self-management training topic areas emphasizing skills such as building social support, using medications effectively, coping with stress, and getting one's needs met in the mental health system are most relevant when offered within the consumer's own residence or community. For example, behavioral tailoring for medication adherence is most effective in the consumer's own residence and may not be relevant in a jail or prison setting where medication self-administration (and refusal) is often not an option. Social skills training for support must be individualized to incorporate the offender's current supports available in the community (Tauber, Wallace, & Lecomte, 2000), and social skills that are appropriate in correctional settings may not be appropriate or effective outside prison walls. Peers are important partners in helping consumers with criminal justice system involvement develop the motivation and illness self-management skills to avoid incarceration, or for those leaving jail or prison to adjust to life outside institutions and avoid re-incarceration.

Selection, Training, and Supervision of Staff

A variety of professionals and paraprofessionals are well suited for teaching offenders in illness self-management skills, if given appropriate training in the program model, if time is set aside for staff to work with consumers, and if ongoing supervision is provided. Clinical supervision is time-consuming and should be listed explicitly among the duties of the administrative-clinical personnel, with reporting responsibilities to people in charge. It is also important to include staff who are not directly involved with the day-to-day training of consumers in illness self-management skills. Teaching illness self-management skills requires an environment that is supportive of the trainers and of the consumers who are learning the skills. Therefore, educating the broader staff about the values and practices involved in IMR and related programs is a necessary part of any successful program implementation.

Adapting Illness Self-Management Programs to Criminal Justice Settings

Illness self-management programs may require adaptation for criminal justice settings, just as they are adapted for other settings where consumers get mental health services (e.g., state hospitals, residential settings, homeless shelters). In addition to programs implemented in the prison settings described above, IMR-oriented services have been delivered in inpatient, outpatient, residential, and homeless/shelter settings, all of which require somewhat different orientations in terms of system-specific and population-specific characteristics. These variations may call for differential emphases in curricular material. For example, in working with homeless consumers who have high rates of substance abuse, it may be important to emphasize material from the substance abuse module of IMR in presenting the other IMR modules, such as coping with stress and managing persistent symptoms. Although the structure of the training need not be altered, additional curriculum or content could be added as appropriate. For example, anger management strategies fit naturally into material on coping with symptoms, or could be woven into a module on building social support. These kinds of content modifications are encouraged and can be done without deviating from the structure of the training procedures.

In addition to adapting curriculum to ensure that it addresses the special needs of persons with mental illness who are involved in the criminal justice system, particular efforts may be required to enlighten staff members about the nature of recovery as conceptualized in illness self-management programs. Such concepts of recovery invoke themes of improved functioning, community integration, enhanced autonomy, and greater control over one's own mental health treatment. These types of goals may be foreign and resisted in traditional criminal justice settings, where a premium is placed on control and close monitoring. Thus, it may be critical to engage staff members in criminal justice settings in discussions and explorations about the meaning of recovery, and how they can support consumer offenders in pursuing their own vision of recovery and achieving greater autonomy, while maintaining their role in protecting society and enforcing sanctions on criminal behavior.

Conclusions

Tremendous strides have been made over the past two decades in developing an evidence-base for teaching individuals with severe mental illness how to better manage their psychiatric disorder in collaboration with professionals, and thereby helping them to articulate and pursue their personal recovery goals. Furthermore, these evidence-based practices for illness self-management have been standardized in the form of "packaged" interventions that readily lend themselves to broad scale implementation. Illness management and recovery-based programs have the potential to reduce criminal offending by persons with mental illness in two fundamental ways. First, poor psychiatric illness management can result in more severe symptoms and more frequent relapses, which can lead to illegal behavior due to problems such as cognitive disorganization (e.g., disorderly conduct because of inability to follow social norms), impaired judgment (e.g., theft, forgery, or extortion occurring in the context of manic symptoms such as increased goal-directed behavior), a distorted sense or reality (e.g., aggression in response to delusions or hallucinations), or increased substance abuse (e.g.,

driving while intoxicated, possession or sale of illegal substances). Improved symptom management and reduced relapses can decrease these criminal behaviors by lowering or eliminating the symptoms that directly lead to those behaviors. Second, as a result of poor mental illness management, and the attendant consequences, such as frequent psychiatric hospitalization, inability to work or fulfill other social roles (e.g., parent), poverty, and stigma, consumers often become demoralized and socially marginalized, leading to criminal behavior out of desperation, affiliation with other marginalized individuals such as "hardened" criminals, or outright rejection of the rules and laws set by society. Helping individuals with mental illness develop hope for the future, and a personal meaning for recovery that includes a sense of purpose, social connection, community reintegration, and self-worth, can instill motivation to learn how to manage one's illness and become a productive member of society.

However, despite the advances in teaching illness self-management skills, the availability of standardized programs, and their potential for reducing criminal offending, these programs are rarely implemented in criminal justice settings with consumers who have severe mental illness. The few efforts to implement such programs in settings serving offenders with mental illness indicate that training in illness self-management can have beneficial effects on consumer functioning and behavioral problems (e.g., aggression), and may be cost-effective as well. There is an urgent need to provide illness self-management training to consumers who are involved in the criminal justice system, including those in diversion programs, jails, and prison settings, and to evaluate the impact of standardized illness management and recovery programs on both mental health and criminal outcomes. Access to such services, and a better understanding of their impact on consumers, the criminal justice system, and society, could reduce the criminalization of persons with severe mental illness, and promote the long-term goal of social and community inclusion of these individuals.

References

Abram, K. M., Teplin, L. A., Charles, D. R., Longworth, S. L., McClelland, G. M., & Dulcan, M. K. (2004). Posttraumatic stress disorder and trauma in youth in juvenile detention. *Archives of General Psychiatry, 61*, 403-410.

Abram, K. M., Teplin, L. A., & McClelland, G. M. (2003). Comorbidity of severe psychiatric disorders and substance use disorders among women in jail. *American Journal of Psychiatry, 160*, 1007-1010.

Adams, K. (1986). The disciplinary experiences of mentally disordered offenders. *Criminal Justice and Behavior, 13,* 297-316.

Anderson, C. M., Reiss, D. J., & Hogarty, G. E. (1986). *Schizophrenia and the Family*. New York: Guilford Press.

Atkinson, J. M., Coia, D. A., Gilmour, W. H., & Harper, J. P. (1996). The impact of education groups for people with schizophrenia on social functioning and quality of life. *British Journal of Psychiatry, 168*, 199-204.

Azrin, N. H., & Teichner, G. (1998). Evaluation of an instructional program for improving medication compliance for chronically mentally ill outpatients. *Behaviour Research and Therapy, 36*, 849-861.

Baldessarini, R. J. (1985). *Chemotherapy in Psychiatry: Principles and Practice (Revised Edition)*. Cambridge, MA: Harvard University Press.

Baucom, T.R. (2004). *Evaluation of the day treatment program at Brown Creek Correctional Institution: A follow-up study*. Unpublished master's thesis, University of North Carolina, Wilmington.

Beck, J. S. (1995). *Cognitive Therapy: Basics and Beyond*. New York: Guilford Press.

Beck, A. J., & Maruschak, L. M. (2001). Mental health treatment in state prisons, 2000: Special report. (NCJ Publication No. 188215). Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Beers, C. W. (1923). *A Mind that Found Itself*. Pittsburgh: University of Pittsburgh Press.

Blackwell, B. (1973). Drug Therapy - patient compliance. *The NE Journal of Medicine, 289*(5), 249-252.

Blaska, B. (1990). The myriad medication mistakes in psychiatry: A consumer's view. *Hospital and Community Psychiatry, 41*, 993-997.

Boczkowski, J., Zeichner, A., & DeSanto, N. (1985). Neuroleptic compliance among chronic schizophrenic outpatients: An intervention outcome report. *Journal of Consulting and Clinical Psychology, 53*, 666-671.

Breen, R., & Thornhill, J. T. (1998). Noncompliance with medication for psychiatric disorders: Reasons and remedies. *CNS Drugs, 9*, 457-471.

Brehm, J. W. (1966). *A Theory of Psychological Reactance*. New York: Academic Press.

Broner, N., Mayrl, D.W., & Landsberg, G. (2005). Outcomes of mandated and non-mandated New York City jail diversion for offenders with alcohol, drug, and mental disorders. *The Prison Journal, 85*(1), 18-49.

Campbell, J. (1997). How consumers/survivors are evaluating the quality of psychiatric care. *Evaluation Review, 21*, 357-363.

Campbell, M., Donaldson, L., Roberts, S., & Smith, J. (1996). A prescribing incentive scheme for non-fund holding general practices: An observational study. *British Medical Journal, 313*, 535-538.

Carter, D. M., Mackinnon, A., & Copolov, D. L. (1996). Patients' strategies for coping with auditory hallucinations. *Journal of Nervous and Mental Disease, 184*, 159-164.

Chamberlin, J. (1978). *On Our Own: Patient-Controlled Alternatives to the Mental Health System*. New York: Hawthorne.

Coldham, E. L., Addington, J., & Addington, D. (2002). Medication adherence of individuals with a first episode of psychosis. *Acta Psychiatrica Scandinavica, 106*, 286-290.

Condelli, W.S., Bradigan, B., & Holanchock, H. (1997). Intermediate care programs to reduce risk and better manage inmates with psychiatric disorders. *Behavioral Sciences and the Law, 15*, 459-467.

Condelli, W.S., Dvoskin, J.A., & Holanchock, M.A. (1994). Intermediate care programs for inmates with psychiatric disorders. *Bulletin of the American Academy of Psychiatry and Law, 22,* 62-69.

Copeland, M. E. (1997). *Wellness Recovery Action Plan*. Brattleboro, VT: Peach Press.

Copeland, M. E. (1999). *Winning Against Relapse: A Workbook of Action Plans for Recurring Health and Emotional Problems*. Oakland, CA: New Harbinger Publications.

Copeland, M. E., & Mead, S. (2004). *Wellness Recovery Action Plan & Peer Support: Personal, Group and Program Development*. Dummerston, Vermont: Peach Press.

Cramer, J. A., & Rosenheck, R. (1999). Enhancing medication compliance for people with serious mental illness. *Journal of Nervous and Mental Disease, 187*, 53-55.

Corrigan, P.W., MacKain, S.J., & Liberman, R.P. (1994). SKills traiing modules--A strategy for dissemination and utilization of a rehabilitation innovation. In J. Rothman & E.J. Thomas (Eds.), *Intervention Research: Design & Development for Human Service*(pp. 317-352). New York: Haworth Press.

Deegan, P. E. (1990). Spirit breaking: When the helping professionals hurt. *The Humanistic Psychologist, 18*, 301-313.

Dekle, D., & Christensen, L. (1990). Medication management (letter to the editor). *Hospital and Community Psychiatry, 41*, 96-97.

Deutsch, A. (1948). *The Shame of the States*. New York: Harcourt, Brace.

Ditton, P.M. (1999). Mental health treatment of inmates and probationers: Special report (NCJ Publication No. 174463). Washington, DC: US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Drake, R. E., Goldman, H. H., Leff, H. S., Lehman, A. F., Dixon, L., Mueser, K. T., & Torrey, W. C. (2001). Implementing evidence-based practices in routine mental health service settings. *Psychiatric Services, 52*, 179-182.

Eckman, T. A., Wirshing, W. C., Marder, S. R., Liberman, R. P., Johnston-Cronk, K., Zimmermann, K., et al. (1992). Technique for training schizophrenic patients in illness self-management: A controlled trial. *American Journal of Psychiatry, 149*, 1549-1555.

Falloon, I. R. H., Boyd, J. L., & McGill, C. W. (1984). *Family Care of Schizophrenia: A Problem-Solving Approach to the Treatment of Mental Illness*. New York: Guilford Press.

Falloon, I. R. H., & Talbot, R. E. (1981). Persistent auditory hallucinations: Coping mechanisms and implications for management. *Psychological Medicine, 11*, 329-339.

Fenton, W. S. (2003). Shared decision making: A model for the physician-patient relationship in the 21st century? *Acta Psychiatrica Scandinavica, 107*, 401-402.

Fenton, W. S., Blyler, C. R., & Heinssen, R. K. (1997). Determinants of medication compliance in schizophrenia: Empirical and clinical findings. *Schizophrenia Bulletin, 23*, 637-651.

Fogarty, J. S. (1997). Reactance theory and patient noncompliance. *Social Science and Medicine, 45*, 1277-1288.

Foster, J., & Gallagher, D. (1986). An exploratory study comparing depressed and nondepressed elders' coping strategies. *Journal of Gerontology, 41*(1), 91-93.

Frese, F. J., & Davis, W. W. (1997). The consumer-survivor movement, recovery, and consumer professionals. *Professional Psychology: Research and Practice, 28*, 243-245.

Gartner, A., & Riessman, F. (1977). *Self-Help in the Human Services*. San Francisco: Jossey-Bass Publishers.

Gingerich, S., & Mueser, K. T. (2005). Illness management and recovery. In R. E. Drake, M. R. Merrens, & D. W. Lynde (Eds.), *Evidence-Based Mental Health Practice: A Textbook* (pp. 395-424). New York: Norton.

Glynn, S. M., Marder, S. R., Liberman, R. P., Blair, K., Wirshing, W. C., Wirshing, D. A., Ross, D., & Mintz, J. (2002). Supplementing clinic-based skills training with manual-based community support sessions: Effects on social adjustment of patients with schizophrenia. *American Journal of Psychiatry, 159*, 829-837.

Gonzalez-Pinto, A., Gonzalez, C., Enjuto, S., Fernandez de Corres, B., Lopez, P., Palomo, J., Gutierrez, M., Mosquera, F., & Perez de Heredia, J. L. (2004). Psychoeducation and cognitive-behavioral therapy in bipolar disorder: An update. *Acta Psychiatrica Scandinavica, 109*, 83-90.

Gould, R. A., Mueser, K. T., Bolton, E., Mays, V., & Goff, D. (2001). Cognitive therapy for psychosis in schizophrenia: An effect size analysis. *Schizophrenia Research, 48*, 335-342.

Hamann, J., Leucht, S., & Kissling, W. (2003). Shared decision making in psychiatry. *Acta Psychiatrica Scandinavica, 107*, 403-409.

Hanson, R. W. (1986). Physician-patient communication and compliance. In K. E. Gerber & A. M. Nehemkis (Eds.), *Compliance: The Dilemma of the Chronically Ill* (pp. 182-212). New York: Springer Publishing Company.

Healey, A., Knapp, M., Astin, J., Beecham, J., Kemp, R., Kirov, G., & David, A. (1998). Cost-effectiveness evaluation of compliance therapy for people with psychosis. *British Journal of Psychiatry, 172*, 420-424.

Herz, M. I., Glazer, W., Mirza, M., Mostert, M. A., & Hafez, H. (1989). Treating prodromal episodes to prevent relapse in schizophrenia. *British Journal of Psychiatry, 155*(Suppl 5), 123-127.

Herz, M. I., Lamberti, J. S., Mintz, J., Scott, R., O'Dell, S. P., McCartan, L., & Nix, G. (2000). A program for relapse prevention in schizophrenia: A controlled study. *Archives of General Psychiatry, 57*, 277-283.

Hogarty, G. E. (2002). *Personal Therapy for Schizophrenia & Related Disorders: A Guide to Individualized Treatment*. New York: Guilford Press.

Hogarty, G. E., Greenwald, D., Ulrich, R. F., Kornblith, S. J., DiBarry, A. L., Cooley, S., Carter, M., & Flesher, S. (1997a). Three year trials of personal therapy among schizophrenic patients living with or independent of family II: Effects of adjustment on patients. *American Journal of Psychiatry, 154*, 1514-1524.

Hogarty, G. E., Kornblith, S. J., Greenwald, D., DiBarry, A. L., Cooley, S., Flesher, S., Reiss, D., Carter, M., & Ulrich, R. (1995). Personal therapy: A disorder-relevant psychotherapy for schizophrenia. *Schizophrenia Bulletin, 21*, 379-393.

Hogarty, G. E., Kornblith, S. J., Greenwald, D., DiBarry, A. L., Cooley, S., Ulrich, R. F., Carter, M., & Flesher, S. (1997b). Three year trials of personal therapy among schizophrenic patients living with or independent of family I: Description of study and effects on relapse rates. *American Journal of Psychiatry, 154*, 1504-1513.

Hornung, W. P., Feldman, R., Klingberg, S., Buchkremer, G., & Reker, T. (1999). Long-term effects of a psychoeducational psychotherapeutic intervention for schizophrenic outpatients and their key-persons -- results of a five-year follow-up. *European Archives of Psychiatry and Clinical Neuroscience, 249*, 162-167.

Hunt, G. E., Bergen, J., & Bashir, M. (2002). Medication compliance and comorbid substance abuse in schizophrenia: Impact on community survival 4 years after a relapse. *Schizophrenia Research, 54*, 253-264.

Jemelka, R., Trupin, E., & Chiles, J. (1989). The mentally ill in prisons: A review. *Hospital & Community Psychiatry, 40,* 481-491.

Johnson, A. B. (1990). *Out of Bedlam: The Truth About Deinstitutionalization*. New York: Basic Books.

Kaufmann, C. L. (1995). The self-help employment center: Some outcomes from the first year. *Psychosocial Rehabilitation Journal, 18*, 145-162.

Kelly, G. R., & Scott, J. E. (1990). Medication compliance and health education among outpatients with chronic mental disorders. *Medical Care, 28*, 1181-1197.

Kemp, R., Hayward, P., Applewhaite, G., Everitt, B., & David, A. (1996). Compliance therapy in psychotic patients: Randomised controlled trial. *British Medical Journal, 312*, 345-349.

Kemp, R., Kirov, G., Everitt, B., Hayward, P., & David, A. (1998). Randomised controlled trial of compliance therapy: 18-month follow-up. *British Journal of Psychiatry, 173*, 271-272.

Kiser, L.J., King, R., & Lefkovitz, P.M. (1999). A comparison of practice patterns and a model continuum of ambulatory behavioral health services. *Psychiatric Services, 50*, 605-618.

Kopelowicz, A., & Liberman, R. P. (1994). Self-management approaches for seriously mentally ill persons. *Directions in Psychiatry, 14*(17), 1-7.

Kopelowicz, A., Zarate, R., Gonzalez Smith, V., Mintz, J. & Liberman, R.P. (2003). Disease management in Latinos with schizophrenia: A family-assisted, skills training approach. *Schizophrenia Bulletin, 29*(2), 211-227.

Kuipers, L., Leff, J., & Lam, D. (2002). *Family Work for Schizophrenia: A Practical Guide*. (Second ed.). London: Gaskell.

Kurtz, L. (1988). Mutual aid for affective disorders: The manic depressive and depressive association. *American Journal of Orthopsychiatric Association, Inc., 58*(1), 152-155.

Liberman, R.P. (1998). International perspectives on skills training for persons with mental disabilities. *International Review of Psychiatry, 10*, 1-89.

Liberman, R. P., DeRisi, W. J., & Mueser, K. T. (1989). *Social Skills Training for Psychiatric Patients*. Needham Heights, MA: Allyn & Bacon.

Liberman, R. P., Wallace, C. J., Blackwell, G., Kopelowicz, A., Vaccaro, J. V., & Mintz, J. (1998). Skills training versus psychosocial occupational therapy for persons with persistent schizophrenia. *American Journal of Psychiatry, 155*, 1087-1091.

Lovell, D., Allen, D., Johnson, C., & Jemelka, R. (2001). Evaluating the effectiveness of residential treatment for prisoners with mental illness. *Criminal Justice & Behavior, 29*, 83 – 104.

Lovell, D. & Jemelka, R. (1996) When inmates misbehave: The costs of discipline. *The Prison Journal, 76*, 165-179.

Lovell, D. & Jemelka, R. (1998). Coping with mental illness in prisons. *Family Community Health*, *21*, 54-66.

Lovell, D., Johnson C., Jemelka, R., Harris, V., & Allen, D. (2001). Living in prison after residential mental health treatment: A program follow-up. *Prison Journal, 81*, 473-490.

MacKain, S.J. & Messer, C. (2004). Ending the inmate shuffle: An intermediate care program for inmates with a chronic mental illness. *Journal of Forensic Psychology Practice, 4*, 87-100.

MacKain, S.J. & Streveler, A. (1990). Social and independent living skills for psychiatric populations in a prison setting: Innovations and Challenges. *Behavior Modification, 14,* 490-518.

Marder, S. R., Wirshing, W. C., Mintz, J., McKenzie, J., Johnston, K., Eckman, T. A., & Johnston-Cronk, K. (1996). Two-year outcome for social skills training and group psychotherapy for outpatients with schizophrenia. *American Journal of Psychiatry, 153*, 1585-1592.

Masur, F. T. (1981). Adherence to health care regimens. In C. K. Prokop & L. A. Bradley (Eds.), *Medical Psychology: Contributions to Behavioral Medicine*. New York: Academic Press, Inc.

Merinder, L. B. (2000). Patient education in schizophrenia: A review. *Acta Psychiatrica Scandinavica, 102*, 98-106.

Monahan, J., Hoge, S. K., Lidz, C., Roth, L. H., Bennett, N., Gardner, W., & Mulvey, E. (1995). Coercion and commitment: Understanding involuntary mental hospital admission. *International Journal of Law and Psychiatry, 18*, 249-263.

Moore, A., Sellwood, W., & Stirling, J. (2000). Compliance and psychological reactance in schizophrenia. *British Journal of Clinical Psychology, 39*, 287-296.

Mueser, K. T., Corrigan, P. W., Hilton, D., Tanzman, B., Schaub, A., Gingerich, S., Essock, S. M., Tarrier, N., Morey, B., Vogel-Scibilia, S., & Herz, M. I. (2002). Illness management and recovery for severe mental illness: A review of the research. *Psychiatric Services, 53*, 1272-1284.

Mueser, K. T., & Glynn, S. M. (1999). *Behavioral Family Therapy for Psychiatric Disorders*. (Second ed.). Oakland, CA: New Harbinger.

Mueser, K. T., Torrey, W. C., Lynde, D., Singer, P., & Drake, R. E. (2003). Implementing evidence-based practices for people with severe mental illness. *Behavior Modification, 27*, 387-411.

Mueser, K. T., Valentiner, D. P., & Agresta, J. (1997). Coping with negative symptoms of schizophrenia: Patient and family perspectives. *Schizophrenia Bulletin, 23*, 329-339.

National Institute of Corrections (2001). Mental health care in prisons. *Special Issues in Corrections*.

New Freedom Commission on Mental Health (2004). *Subcommittee on Criminal Justice: Background Paper*. DHHS Pub. No. SMA-04-3880. Rockville, MD: 2004.

O'Connor, F.W., Lovell, D. & Brown, L. (2002). Implementing residential treatment for prison inmates with mental illness. *Archives of General Nursing, 16,* 232-238.

O'Donnell, C., Donohoe, G., Sharkey, L., Owens, N., Migone, M., Harries, R., Kinsella, A., Larkin, C., & O'Callaghan, E. (2003). Compliance therapy: A randomised controlled trial in schizophrenia. *British Medical Journal, 327*, 834.

Perry, A., Tarrier, N., Morriss, R., McCarthy, E., & Limb, K. (1999). Randomised controlled trial of efficacy of teaching patients with bipolar disorder to identify early symptoms of relapse and obtain treatment. *British Medical Journal, 318*, 149-153.

Pilling, S., Bebbington, P., Kuipers, E., Garety, P., Geddes, J. R., Orbach, G., & Morgan, C. (2002). Psychological treatments in schizophrenia: I. Meta-analysis of family intervention and cognitive behaviour therapy. *Psychological Medicine, 32*, 763-782.

Razali, M. S., & Yahya, H. (1995). Compliance with treatment in schizophrenia: A drug intervention program in a developing country. *Acta Psychiatrica Scandinavica, 91*, 331-335.

Santrock, J. W., Minnett, A. M., & Campbell, B. D. (1994). *The Authoritative Guide to Self-Help Books*. New York: Guilford Press.

Schatzberg, A. F., & Nemeroff, C. B. (Eds.). (2001). *Essentials of Clinical Psychopharmacology*. Washington, DC: American Psychiatric Publishing, Inc.

Scheifler, P. L. (2000). *Team Solutions: A Comprehensive Psychoeducational Program Designed to Help You Educate Your Clients with Schizophrenia (Instructors Guide and Patient Workbooks)*. Indianapolis: Eli Lilly and Company.

Swezey, R. L., & Swezey, A. M. (1976). Educational theory as a basis for patient education. *Journal of Chronic Diseases, 29*, 417-422.

Tarrier, N. (1992). Management and modification of residual positive psychotic symptoms. In M. Birchwood & N. Tarrier (Eds.), *Innovations in the Psychological Management of Schizophrenia* (pp. 147-169). Chichester, England: John Wiley & Sons.

Tauber, R., Wallace, C. J., & Lecomte, T. (2000). Enlisting indigenous community supporters in skills training programs for persons with severe mental illness. *Psychiatric Services, 51*, 1428-1432.

Teplin, L. A. (1994). Psychiatric and substance abuse disorders among male urban jail detainees. *American Journal of Public Health, 84*, 290-293.

Teplin, L. A., Abram, K. M., & McClelland, G. M. (1996). Prevalence of psychiatric disorders among incarcerated women. I. Pretrial jail detainees. *Archives of General Psychiatry, 53*, 505-512.

Toch, H. & Adams, K. (1988). Punishment, treatment and prison infractions. *Journal of Offender Counseling Services and Rehabilitation, 12*, 5-18.

Toro, P. A., Reischl, T. M., Zimmerman, M. A., Rappaport, J., Seidman, E., Luke, D. A., & Roberts, L. J. (1988). Professionals in mutual help groups: Impact on social climate and members' behavior. *Journal of Consulting and Clinical Psychology, 56*, 631-632.

Velligan, D. I., Bow-Thomas, C. C., Huntzinger, C., Ritch, J., Ledbetter, N., Prihoda, T. J., & Miller, A. L. (2000). Randomized controlled trial of the use of compensatory strategies to enhance adaptive functioning in outpatients with schizophrenia. *American Journal of Psychiatry, 157*, 1317-1323.

Vreeland, B., Minsky, S., Yanos, P. T., Gara, M., Menza, M., Kim, E., Toto, A. M., & Allen, L. (Submitted). Efficacy of a modular psychoeducational program for increasing patient knowledge of illness management and treatment: The Team Solutions Program.

Wahass, S., & Kent, G. (1997). Coping with auditory hallucinations: A cross-cultural comparison between Western (British) and Non-Western (Saudi Arabian) patients. *Journal of Nervous and Mental Disease, 185*, 664-668.

Wallace, C. J., Liberman, R. P., MacKain, S. J., Blackwell, G., & Eckman, T. (1992). Effectiveness and replicability of modules for teaching social and instrumental skills to the severely mentally ill. *American Journal of Psychiatry, 149*, 654-658.

Wennberg, J. E. (1991). Outcomes research, patient preference, and the primary care physician. *Journal of the American Board of Family Practice, 4*, 365-367.

Wirshing, W. C., Marder, S. R., Eckman, T., Liberman, R. P., & Mintz, J. (1992). Acquisition and retention of skills training methods in chronic schizophrenic outpatients. *Psychopharmacology Bulletin, 28*, 241-245.

Wollert, R. W., Knight, B., & Levy, L. H. (1980). Make today count: A collaborative model for professional and self-help groups. *Professional Psychology, February*, 130-138.

Zygmunt, A., Olfson, M., Boyer, C. A., & Mechanic, D. (2002). Interventions to improve medication adherence in schizophrenia. *American Journal of Psychiatry, 159*, 1653-1664.